an optical system mounting member configured to support at least a portion of said optical system;

a laser diode mounting member configured to support said laser diode, said optical system mounting member being attached to said laser diode mounting member;

a bottom plate configured to support said laser diode, said optical system, said optical system mounting member, and said laser diode mounting member; and

a temperature control device thermally connected to said laser diode by said laser diode mounting member, said temperature control device being attached to said bottom plate,

wherein said optical system mounting member is not in contact with said temperature control device.

3. (Once Amended) The laser diode module according to Claim 1, wherein said temperature control device is a thermo module, said thermo module having a first plate member attached to said laser diode mounting member, a second plate member attached to said bottom plate, and a peltier element positioned between said first plate member and said second plate member.

4. (Once Amended) A laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

an optical system mounting member configured to support at least a portion of said optical system;

a laser diode mounting member configured to support said laser diode, said optical system mounting member being attached to said laser diode mounting member;

a bottom plate configured to support said laser diode, said optical system, said optical system mounting member, and said laser diode mounting member; and

a temperature control device thermally connected to said laser diode by said laser diode mounting member, said temperature control device being attached to said bottom plate,

wherein said temperature control device is a thermo module, said thermo module having a first plate member attached to said laser diode mounting member, a second plate member attached to said bottom plate, and a peltier element positioned between said first plate member and said second plate member, and

wherein said laser diode mounting member is formed of material having a linear expansion coefficient in a range between a linear expansion coefficient of said optical system mounting member and a linear expansion coefficient of said first plate member of said thermo module.

5. (Once Amended) A laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

an optical system mounting member configured to support at least a portion of said optical system;

a laser diode mounting member configured to support said laser diode, said optical system mounting member being attached to said laser diode mounting member;

a bottom plate configured to support said laser diode, said optical system, said optical system mounting member, and said laser diode mounting member; and

a temperature control device thermally connected to said laser diode by said laser diode mounting member, said temperature control device being attached to said bottom plate,

wherein said temperature control device is a thermo module, said thermo module having a first plate member attached to said laser diode mounting member, a second plate member attached to said bottom plate, and a peltier element positioned between said first plate member and said second plate member, and

wherein said optical system mounting member has a thermal conductivity lower than a thermal conductivity of said laser diode mounting member and said first plate member of said thermo module.

18. (Once Amended) A laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

an optical system mounting member configured to support at least a portion of said optical system;

a laser diode mounting member configured to support said laser diode, said optical system mounting member being attached to said laser diode mounting member; and

a bottom plate configured to support said laser diode, said optical system, said optical system mounting member, and said laser diode mounting member,

wherein said lens portion is a discrete lens supported by said optical system mounting member, and

wherein said laser diode mounting member is directly fixed on said bottom plate.

20. (Once Amended) A laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

an optical system mounting member configured to support at least a portion of said optical system;

a laser diode mounting member configured to support said laser diode, said optical system mounting member being attached to said laser diode mounting member; and

a bottom plate configured to support said laser diode, said optical system, said optical system mounting member, and said laser diode mounting member, wherein:

said laser diode mounting member is made of a material having a thermal conductivity of at least 150 W/mK; and

said optical system mounting member is made of a material having a thermal conductivity of at most 50 W/mK.

---

21. (Once Amended) A laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

an optical system mounting member configured to support at least a portion of said optical system;

a laser diode mounting member configured to support said laser diode, said optical system mounting member being attached to said laser diode mounting member; and

a bottom plate configured to support said laser diode, said optical system, said optical system mounting member, and said laser diode mounting member,

wherein said optical system mounting member is made of a material having a Young's modulus of at least 15 x 10^3 kg/mm^2.

23. (Once Amended) A semiconductor laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

a fastening means for supporting at least a portion of said optical system;

a base configured to support said fastening means and said laser diode;

a bottom plate configured to support said laser diode, said optical system, said fastening means, and said base, wherein said base includes a laser diode mounting member and a fastening means mounting member, said laser diode mounting member having a laser diode mounting region configured to mount said laser diode, said fastening means mounting member being mounted to said laser diode mounting member at a position other than said laser diode mounting region; and

a temperature control device thermally connected to said laser diode by said laser diode mounting member, said temperature control device being attached to said bottom plate,

wherein said fastening means mounting member is not in contact with said temperature control device.

24. (Once Amended) A semiconductor laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

a fastening means for supporting at least a portion of said optical system;

a base configured to support said fastening means and said laser diode; and

a bottom plate configured to support said laser diode, said optical system, said fastening means, and said base,

wherein said base includes a laser diode mounting member and a fastening means mounting member, said laser diode mounting member having a laser diode mounting region configured to mount said laser diode, said fastening means mounting member being mounted to said laser diode mounting member at a position other than said laser diode mounting region, and further comprising:

a thermo module mounted on said bottom plate, said thermo module having a base side plate member on which said base is mounted, wherein said laser diode mounting member is formed of a material having a linear expansion coefficient in a range between a linear expansion coefficient of said fastening means mounting member and a linear expansion coefficient of said base side plate member of said thermo module.

32. (Once Amended) A semiconductor laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

a fastening means for supporting at least a portion of said optical system;

a base configured to support said fastening means and said laser diode; and

a bottom plate configured to support said laser diode, said optical system, said fastening means, and said base,

wherein said base includes a laser diode mounting member and a fastening means mounting member, said laser diode mounting member having a laser diode mounting region configured to mount said laser diode, said fastening means mounting member being mounted to said laser diode mounting member at a position other than said laser diode mounting region, wherein said lens portion has a fiber lens formed on said optical fiber, wherein said fiber lens has a tip end side arranged to oppose a light emitting facet of said laser diode, and wherein said fiber lens is an anamorphic lens.

38. (Once Amended) A semiconductor laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

a fastening means for supporting at least a portion of said optical system;

a base configured to support said fastening means and said laser diode; and

a bottom plate configured to support said laser diode, said optical system, said fastening means, and said base,

wherein said base includes a laser diode mounting member and a fastening means mounting member, said laser diode mounting member having a laser diode mounting region configured to mount said laser diode, said fastening means mounting member being mounted to said laser diode mounting member at a position other than said laser diode mounting region, and wherein said laser diode mounting member is directly fixed on said bottom plate.

40. (Once Amended) A semiconductor laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

a fastening means for supporting at least a portion of said optical system;

a base configured to support said fastening means and said laser diode; and

a bottom plate configured to support said laser diode, said optical system, said fastening means, and said base,

wherein said base includes a laser diode mounting member and a fastening means mounting member, said laser diode mounting member having a laser diode mounting region configured to mount said laser diode, said fastening means mounting member being mounted to said laser diode mounting member at a position other than said laser diode mounting region, and wherein:

said laser diode mounting member is made of a material having a thermal conductivity of at least 150 W/mK; and

said fastening means mounting member is made of a material having a thermal conductivity of at most 50 W/mK.

41. (Once Amended) A semiconductor laser diode module comprising:

a laser diode;

an optical system including an optical fiber and a lens portion, said optical system being configured to receive and transmit a beam emitted from said laser diode through said lens portion to said optical fiber along an optical axis;

a fastening means for supporting at least a portion of said optical system;

a base configured to support said fastening means and said laser diode; and

a bottom plate configured to support said laser diode, said optical system, said fastening means, and said base,

wherein said base includes a laser diode mounting member and a fastening means mounting member, said laser diode mounting member having a laser diode mounting region configured to mount said laser diode, said fastening means mounting member being mounted to said laser diode mounting member at a position other than said laser diode mounting region, and wherein said fastening means mounting member is made of a material having a Young's modulus of at least 15×10^3 kg/mm^2.